

## Replacement Instructions

# hp StorageWorks MSA Hub 2/3

*These instructions apply to the MSA1000 product family. The part may also be used in other HP products. Please refer to documentation for your specific product for detailed replacement instructions.*



If the product in which this part is being replaced is still under HP warranty, then the replacement part(s) referred to in these Replacement Instructions is provided under the terms and conditions of the Hewlett-Packard Company Limited Warranty for that product. A copy of this Limited Warranty may be viewed at:

<http://h18006.www1.hp.com/products/storageworks/warranty.html>

If this is a trade sale part (product out of warranty), then the replacement part(s) referred to in these Replacement Instructions is provided under HP's express limited warranty statement, which may be viewed at:

[http://customerops.corp.hp.com/1sw/pdm\\_om/warranty\\_support/policies/2330100.doc](http://customerops.corp.hp.com/1sw/pdm_om/warranty_support/policies/2330100.doc)

The replacement part takes on either the Limited Warranty Period of the part being replaced or a ninety-day period that begins upon installation of the replacement part, whichever is greater.

The information contained on these replacement instructions is subject to change without notice. The only warranty for this replacement product is as noted above. Nothing in these replacement instructions should be construed as constituting an additional warranty. The information provided in these replacement instructions is provided "AS IS" and HP is not liable for technical or editorial errors or omissions contained herein.

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MSA Hub 2/3 Replacement Instructions

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Part Number: 358187-001



358187-001

## About this document

This document details the procedures for replacing a failed MSA Hub 2/3 in HP StorageWorks Modular Smart Array (MSA) storage systems.

## Verifying component failure

Before replacing the hub, use the following methods to verify the component failure.

- Check the controller fault LED (Figure 1, ❶). If the LED is on, it indicates a failure.

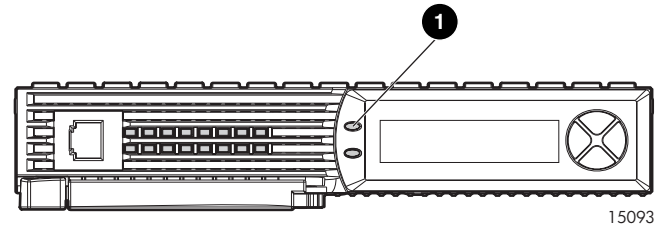


Figure 1: Controller fault indicator

- If the service indicator LED flashes amber, it indicates a failure (Figure 2, ❶).

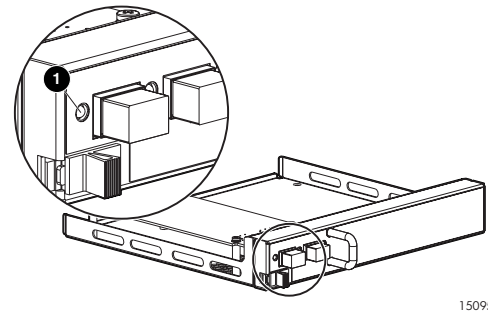


Figure 2: Service indicator

- Check the controller LCD for one of the error messages listed in Table 1.

Table 1: LCD Error Messages

No.	Message
515	FIBRE DEVICE HARDWARE FAILURE
516	FIBRE SUBSYSTEM LINK FAILURE

## Before you begin

Read the following cautions and information before beginning removal and replacement procedures.



**WARNING:** To reduce the risk of injury from laser radiation or damage to the equipment, observe the following precautions:

- Do not open any panels, operate controls, make adjustments, or perform procedures to a laser device other than those specified herein.
- Do not stare into the laser beam when panels are open.



**Caution:** Be sure the replacement part is available before removing the failed component. Removing a component impacts cooling within the enclosure.



**Caution:** Parts can be damaged by electrostatic discharge. Use proper anti-static protection. Refer to the documentation that shipped with your system for additional information.



**Caution:** It is important to follow these instructions when replacing components in the MSA. If the procedure is done improperly, it is possible to lose data or damage equipment.

**Note:** Before replacing the MSA Hub 2/3 it is important to stop all system access (e.g. application, system I/O or RAW device file path/s) to the device.

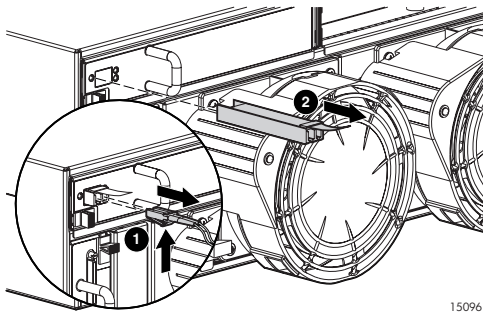
## Step 1: Removing the SFP transceiver



**WARNING:** To reduce the risk of injury from laser radiation or damage to the equipment, observe the following precautions:

- Do not open any panels, operate controls, make adjustments, or perform procedures to a laser device other than those specified herein.
- Do not stare into the laser beam when panels are open.

1. Press the release clip on the bottom of the cable connector ❶ to remove the Fibre Channel cable.
2. Pull the transceiver out of the device by pulling up and out on the plastic tab ❷.



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Figure 3: Removing the SFP transceiver

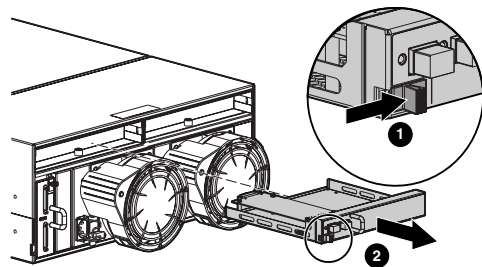


**Caution:** Touching the end of a fibre cable damages the cable. Whenever a fibre cable is not connected, replace the protective covers on the ends of the cables.

## Step 2: Removing the hub

To remove the hub (see Figure 4):

1. Slide the port-colored release latch ❶ to the right.
2. Slide the hub ❷ straight out.



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Figure 4: Removing the hub

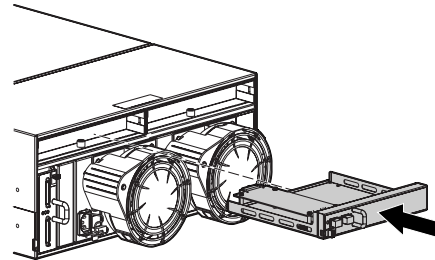
## Step 3: Installing the hub

To install the new hub:

1. Slide the hub straight in.

**Note:** The release latch should automatically close.

2. Make sure the release latch has closed and is secure.



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Figure 5: Installing the hub

## Step 4: Installing the SFP transceiver

Insert the SFP transceiver into the new hub and replace the Fibre Channel cable.



**Caution:** To reduce the risk of damage to the equipment, do not use excessive force when inserting the transceiver.

Installation is complete.

## Verifying the replacement

After replacing the failed hub verify that:

- Check the controller fault LED (Figure 1, ❶) to be sure that the LED is off. Unread error log messages may cause the LED to remain lit. Be sure all error messages that have been responded to are deleted.
- The service indicator LED (Figure 2, ❶) is solid green.
- No new error messages are displayed on the LCD.

## Returning the failed component

Please follow the return instructions provided in the new component package.

## Additional information

For additional information, refer to the MSA technical documents web site at <http://www.hp.com/go/msa1000>.